SIEMENS

SIREMOBIL Compact

SP

System Manual

Service Instructions

Codonics Printer EP 1660L

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Documentation required

- Operating instructions for Codonics Printer EP1660L
- System folder of the system
- Assembly instructions for Codonics Printer EP1660, print number SPR2-130.814.01

Measuring and auxiliary equipment required

- Oscilloscope > 50 MHz e.g. Tektronix 2232, 97 02 234
- Service PC with operating system, DOS 6.0 or higher / Windows 3.1 / 3.11 / 95 / 98
- Centronics parallel printer cable (standard, to be obtained locally)
- Codonics test image file (please download from the Intranet and transfer to the service PC)

Tools required

- Tool kit
- 1 set of Allen keys
- 1 set of torque screwdrivers

Safety notes

The product-specific safety notes detailed in the system folder and the general safety notes detailed in ARTD part 2 must be adhered to at all times.

Once all the work is complete, carry out the protective conductor test in accordance with ARTD-002.731.17. The protective conductor resistance must not exceed 0.2 ohms.

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Framegrabber SA500

NOTE	**In the event of a fault, the entire framegrabber should be replaced.** **If it is replaced, the handheld control unit and the cables are not supplied with the replacement framegrabber.** **The framegrabber is programmed to the default settings of 60 Hz video frequency and positive image display when a replacement unit is supplied, in the same way as for a new unit.** **See also the installation instructions for Codonics Printer EP 1660.**

- Disconnect the system from the power supply; unplug the power plug.
- Remove the rear panel of the monitor trolley.
- Unplug all connections to the framegrabber.
- Remove the screws fastening the side of the framegrabber to the system monitor trolley.
- Remove all the outer side cover screws on the new framegrabber. See installation instructions for Codonics Printer EP 1660, Chapter 2, "Installing the framegrabber in the monitor trolley".
- On the old framegrabber, screw on the cover using the cover screws you have just removed.
- Install the new framegrabber in the monitor trolley.
- Plug all the connections back into the framegrabber and secure in place.
- Commission the new framegrabber as described in Chapter 3 of the installation instructions (Commissioning).
- Refit all the covers. Ensure that the protective conductor is connected properly. Carry out the protective conductor test. See safety notes.

Printer EP1660 L

NOTE	**In the event of a fault, the entire printer should be replaced.** **The film cassette and the cables are not supplied with the replacement unit.**

NOTE	**The replacement process requires 2 people for a short time.**

- Remove the new printer from the packaging. See installation instructions for Codonics Printer EP 1660, Chapter 2, "Unpacking the printer".
- Secure the thermal head in the old printer using the two transport locks you have just removed.
- Remove the film / paper cassette from the old printer and put to one side.
- Disconnect the system from the power supply; unplug the power plug.
- Remove the rear panel of the monitor trolley.

- Detach all connections to the printer. Remove the cover (see also Chapter 2, Fig. 16 of the installation instructions) and unplug the fan power supply plug.
- Pull the printer all the way out of the monitor trolley on its rails.
- One person should make sure that the printer does not fall off the rails.
  The 2nd person should remove the screws attaching the printer to the rails. Then lift the printer off the rails and place it on the floor.
- Place the new printer on the rails. One person should make sure that the printer does not fall off the rails. The 2nd person should attach the printer to the rails using the fastening screws which have just been removed.
- Plug all the connections back into the printer and secure them in place. Plug in the fan power supply plug and replace the cover (see also Chapter 2, Fig. 16 of the installation instruc-tions).
- Check the image quality in accordance with the assembly instructions for Codonics Printer EP 1660, Chapter 3, "Testing the image quality". If necessary, carry out commissioning in accordance with Chapter 3 of the installation instructions.
- Refit all the covers. Ensure that the protective conductor is connected properly. Carry out the protective conductor test. See safety notes.

Replacing the handheld control unit

- Switch off the system; there is no power to the framegrabber.
- Remove the rear panel of the monitor trolley.
- Pull the printer all the way out on its rails.
- Unplug the handheld control unit cable on the framegrabber.
- Pull the cable out of the front of the monitor trolley.
- Pull in the new cable, plug it in and fasten it.
- Check that the handheld control unit is working properly.
- You do not need to change any of the settings or the programming.
- Refit all the covers. Ensure that the protective conductor is connected properly. Carry out the protective conductor test. See safety notes.

Replacing the cable set

NOTE	**The cable set can only be supplied complete. If any cables are defective or the chain link trunking is damaged, all the cables and the chain link trunking must be replaced.**

- Disconnect the system from the power supply; unplug the power plug from the socket.
- Remove the rear panel of the monitor trolley.
- Undo the chain link trunking at both ends.
- Unplug all the connections from the framegrabber and the printer.
- Remove any cable ties.

- Fit the new chain link trunking.
- Pull in the cables and connect or plug in again on a 1:1 basis.
- Check that the printer / framegrabber is working properly.
- Check the image quality in accordance with the installation instructions for Codonics Printer EP 1660, Chapter 3, "Testing the image quality".
- Refit all the covers. Ensure that the protective conductor is connected properly.

Replacing the fan

- Disconnect the system from the power supply; unplug the power plug from the socket.
- Open the large rear cover on the monitor trolley.
- There is a fan mounted on each of the printer attachment rails.
- Disconnect the power supply to the defective fan.
- Replace the defective fan and plug the power supply back in again.
- Switch the system on.
- Check that the fans are working properly.
- Refit all the covers. Ensure that the protective conductor is connected properly. Carry out the protective conductor test. See safety notes.

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Enabling the framegrabber service mode

- On the control panel, press the "OK/Enter" button. The control panel displays the main menu.
- On the control panel, press the "Erase/Cancel" button 4 times.
- On the control panel, press the "Color Capture / Time" button once. The display shows "Key not supported ...".
- On the control panel, press the "OK/Enter" button.
- On the control panel, press the "Menu" button.
- Using the cursor keys "↑" and "↓", select the menu line "Installation" and press the "OK / Enter" button.

NOTE	**If you cannot select the installation menu, press the OK/Enter button again and proceed as described above to "Enable the service mode". The installation menu remains active and can be selected until the frame grabber is switched off.**

Selecting the MEMOSKOP SMPTE test image

- On the MEMOSKOP keyboard or on the chassis for both monitors, select LUT1.
- Call up the SMPTE test image to the MEMOSKOP.
  - If a Memoskop keyboard is connected, call up the SMPTE test image in user setup and display on both monitors.
  - If there is no keyboard, select "SMPTE" from the "Test" menu in the Memoskop service program.
- Then click on the "Put to Memoskop" button in the main menu of the service program. This displays the SMPTE test image on both monitors.
- If there is a keyboard, switch on the text display on the MEMOSKOP.
- Pressing the print key at the MEMOSKOP keyboard, starts the image transfer to the printer.

Printing the internal test image (Framegrabber SMPTE test image)

- On the framegrabber control panel, press the "MENU" button.
- Using the cursor keys "↑" and "↓", select the menu line "MISCELLANEOUS" and press the "OK/Enter" button.
- Using the cursor keys "↑" and "↓", select the menu line "TEST PATTERN" and press the "OK/Enter" button.
- Using the cursor keys "↑" and "↓", select the menu line "B&W" and press the "OK/Enter" button.
- The SMPTE test image is transferred from the framegrabber straight to the printer.
- By selecting the "Erase/Cancel" button, you can close the menu you have just opened.

Printing the Codonics SMPTE test image file

NOTE

The Codonics test image file and the associated batch file can be downloaded from the Intranet. The batch file only serves to call up the necessary DOS commands without manual input. The batch file is written for the parallel port "LPT1".

If there are several parallel ports in your service PC, you can select a different port by editing the batch file using a text editor (e.g. edit.exe). Please note the comments in the batch file.

- Switch off the system.
- Remove the rear panel of the monitor trolley.
- Unplug the control cable (Centronic plug) from the printer.
- Plug a conventional printer cable into the parallel port (printer port) of the service PC.
- Plug the other end of the cable into the Codonics printer (Centronics socket).
- Switch the system on.
- Switch the service PC on.
- Copy the Codonics test image file and the associated batch file to the same directory on the service PC.
- For the operating systems WIN 3.1 / 3.11 / 95 / 98 start up a DOS window.
- In DOS mode, move to the directory to which you copied the files.
- Run the batch file.
- The Codonics test image file is transferred to the printer via the parallel port.

Framegrabber settings

Default settings

NOTE

Select the correct video frequency and image polarity and then save the default settings. These do not need to be programmed separately. See section on Video frequency and Image polarity.

Adjustments for PAL / 50Hz		Adjustments for NTSC / 60Hz	
BW left margin	223 pixel	BW left margin	215 pixel
BW width	510 pixel	BW width	512 pixel
Top margin	039 lines	Top margin	027 lines
Height	512 lines	Height	444 lines
Htotal	848 pixel	Htotal	848 pixel
Line rate	15625 Hz	Line rate	15625 Hz
Horiz Pixel res	390 pixel	Horiz Pixel res	362 pixel
Vertical Pixel res	429 pixel	Vertical Pixel res	329 pixel

Gray steps with MEMOSKOP SMPTE test pattern , LUT 1, positive image display *1)	
BW lightness	151 $\pm$ 10 *1)
BW darkness	88 $\pm$ 10 *1)

Adjustment values for positive image display	
BW lightness	151 $\pm$ 10
BW darkness	088 + 43 (Offset) = 131 $\pm$ 10
Gamma	1.2
Contrast	0

Adjustment values for negative image display	
BW lightness	175 $\pm$ 10
BW darkness	088 $\pm$ 10
Gamma	0.8
Contrast	20

*1) The values are given after carrying out the "Calibrate video" adjustment of the framegrabber, but can differ slightly. For positive image display, an offset must be added to the BW darkness value and the new value must be programmed. See the tables "Adjustment values for positive image display" and "Adjustment values for negative image display", below.

ADC recalibration

NOTE	**The ADC can be automatically recalibrated for troubleshooting purposes. However, the values given differ from the default settings. In order to avoid image quality problems, the unit should be reprogrammed after the automatic recalibration of the ADC in accordance with the section on "Video frequencies and image polarity".**

NOTE	**The SMPTE test image must be on the MEMOSKOP video output OUT3 during recalibration.**

- Call up the SMPTE test image on the MEMOSKOP and save it.
- Call up the saved test image and display it on both monitors.
- On the frame grabber control panel, press the "MENU" button.
- Using the cursor keys "↑" and "↓", select the menu line "MISCELLANEOUS" and press the "OK/Enter" button.
- Using the cursor keys "↑" and "↓", select the line "CAL VIDEO ADC ONLY" and press the "OK/Enter" button.
- This carries out the ADC recalibration.

Pixel clock & ADC recalibration

NOTE	**The ADC and the pixel clock phase can be automatically recalibrated for troubleshooting purposes. However, the values given differ from the default settings. In order to avoid image quality problems, the unit should be reprogrammed after the automatic recalibration of the ADC in accordance with the section on "Video frequency and Image polarity".**

NOTE	**The SMPTE test image must be on the MEMOSKOP video output OUT3 during recalibration.**

- Call up the SMPTE test image to the MEMOSKOP and save it.
- Call up the saved test image and display it on both monitors.
- On the framegrabber control panel, press the "MENU" button.
- Using the cursor keys "↑" and "↓", select the menu line "MISCELLANEOUS" and press the "OK/Enter" button.
- Using the cursor keys "↑" and "↓", select the line "CALIBRATE VIDEO" and press the "OK/Enter" button.
- This carries out the ADC recalibration.

Video frequency and image polarity

NOTE

Selecting the video frequency and the image polarity sets both the image refresh rate and the default values for the image quality (see section on Default settings).

- On the framegrabber control panel, press the "Menu" button.
- Using the cursor keys "↑" and "↓", select the menu line "Installation" and press the "OK / Enter" button. See also "Enabling the framegrabber service mode"
- On the framegrabber control panel, use the cursor keys "↑" and "↓" to select the line "Select/Setup Host" and press the "OK/Enter" button.
- Using the cursor keys "↑" and "↓", select the menu line "SIEMENS" and press the "OK / Enter" button.
- There are 4 different selection menus available:

Menu	Video frequency	Image polarity	Description
SIREMOBIL C NTSC	60 Hz or 120 Hz	Positive	Factory setting
SIREMOBIL C PAL	50 Hz or 100 Hz	Positive	Select 50 Hz or 100 Hz image refresh frequency and positive image display
SIREMOBIL NEG 60	60 Hz or 120 Hz	Negative	Select 60 Hz or 120 Hz image refresh frequency and negative image display
SIREMOBIL NEG 50	50 Hz or 100 Hz	Negative	Select 50 Hz or 100 Hz image refresh frequency and negative image display

- Using the cursor keys "↑" and "↓", select the relevant line and press the "OK/Enter" button.

Automatic size adjustment

NOTE

This adjustment is only required if 28 44 376 X2183 monitors are connected.
The framegrabber is supplied with the geometric dimensions for monitor output signals optimized for 100 to 120 Hz.
If 28 44 376 X2183 monitors with 50 Hz or 60 Hz image refresh rate are connected, the text display is not shown completely on the film.
To correct this, run the automatic size adjustment function for the framegrabber.

- Using the cursor keys "↑" and "↓", select the line "INSTALLATION" and press the "OK/Enter" button. See also "Enabling the framegrabber service mode"
- On the framegrabber control panel, use the cursor keys "↑" and "↓" to select the line "Select/Setup Host" and press the "OK/Enter" button.

- Using the cursor keys "↑" and "↓", select the menu line "SIEMENS" and press the "OK / Enter" button.
- Using the cursor keys "↑" and "↓" select the correct video frequency and image polarity and press the "OK/Enter" button. The currently programmed value is highlighted with a "*****" at the beginning of the line.
- Using the cursor keys "↑" and "↓", select the line "Automatic Sizing" and press the "OK/Enter" button.
- Confirm the question "Automatic Sizing Proceed?" by pressing the "OK/Enter" button.
- Press the "Menu" button. The main menu is now selected again.

Programming the film type for the printer

- Insert the film supplied into the film compartment of the printer. Program the film type. See operating instructions, Chapter "Loading DirectVista Media".

B&W DEST settings

NOTE	**The "B&W DEST settings" menu and its submenus contain the basic configuration of the printer (Select B&W menu) and the Ping B&W function. The submenus "Select Color", "Ping Color", "Modify", "Add" and "Delete" are not used.**

- Either press the "MENU" button on the framegrabber control panel. Using the cursor keys "↑" and "↓", select the menu line "DESTINATION" and press the "OK/Enter" button.
- Or press the "B&W DEST" button on the framegrabber control panel.

Select B&W submenu

NOTE	**After the menu is selected, the current printer name and printer type set is displayed and/or selected.**

- The "Select B&W" submenu shows the currently programmed printer.

Ping B&W submenu

NOTE	**Calling up the "Ping B&W" function checks the connection from the framegrabber to the printer.**

- Call up the SMPTE test image to the MEMOSKOP and save it.
- Call up the saved test image and display it on both monitors.
- On the framegrabber control panel, press the "MENU" button.
- Using the cursor keys "↑" and "↓", select the menu line "DESTINATION" and press the "OK/Enter" button.

- Using the cursor keys "↑" and "↓", select the line "PING B&W" and press the "OK/Enter" button.
- The framegrabber checks the connection between the framegrabber and the printer. If the connection is OK, "Ping Successful" is displayed on the control panel.

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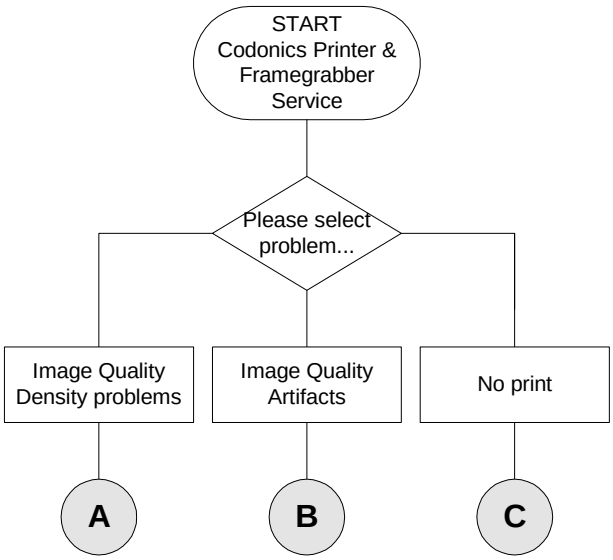
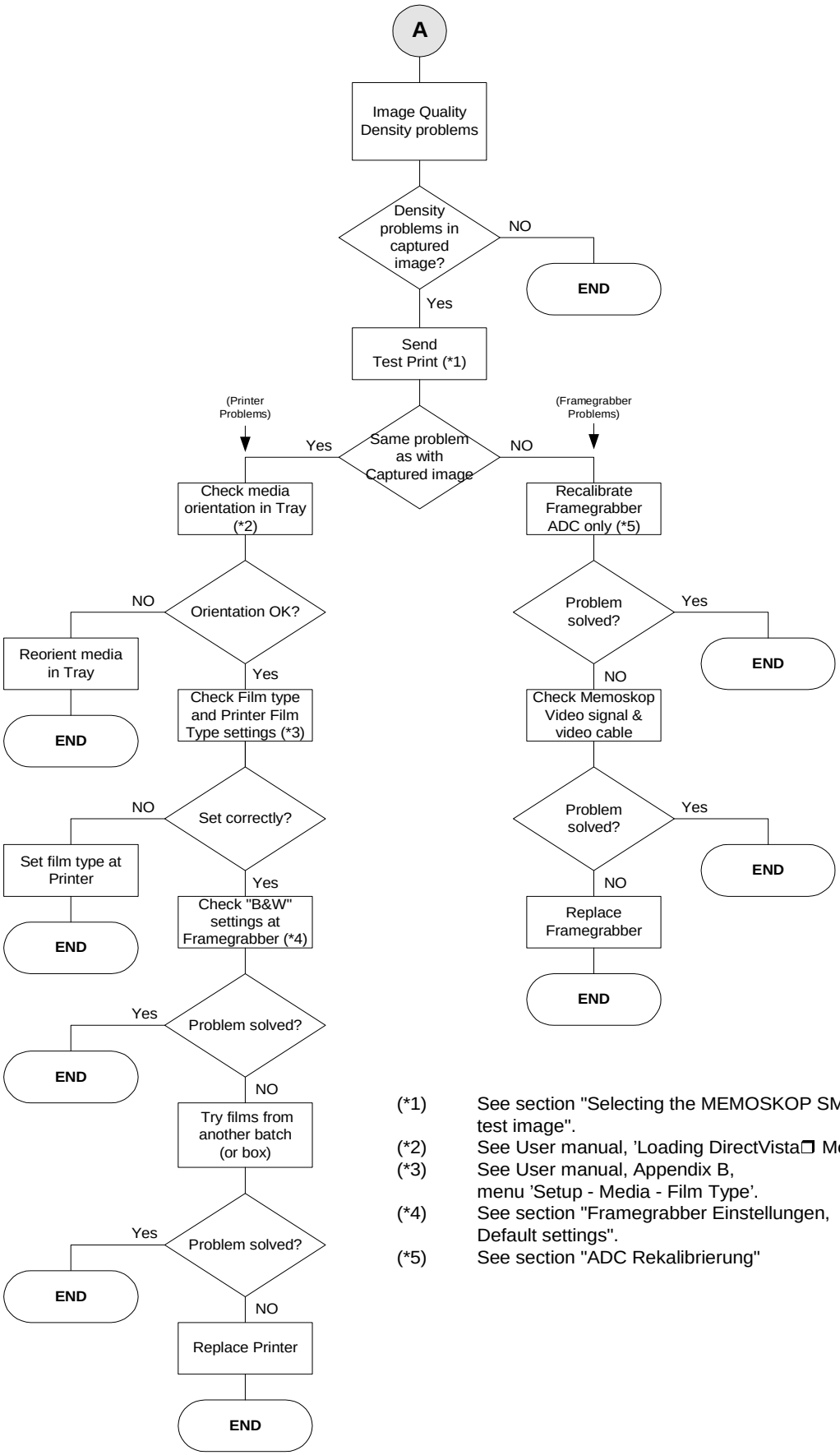
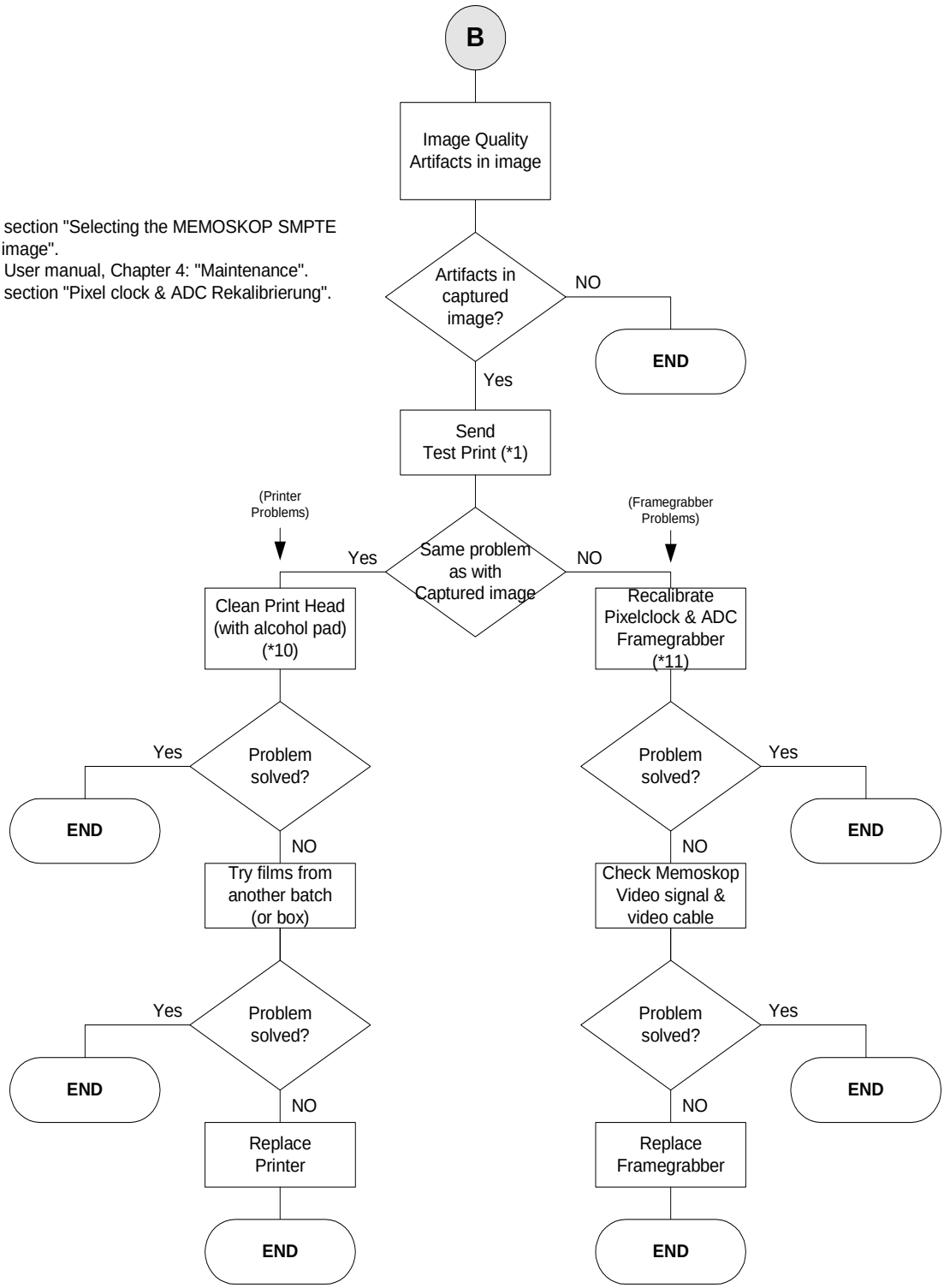
The following flow charts can be used for troubleshooting.

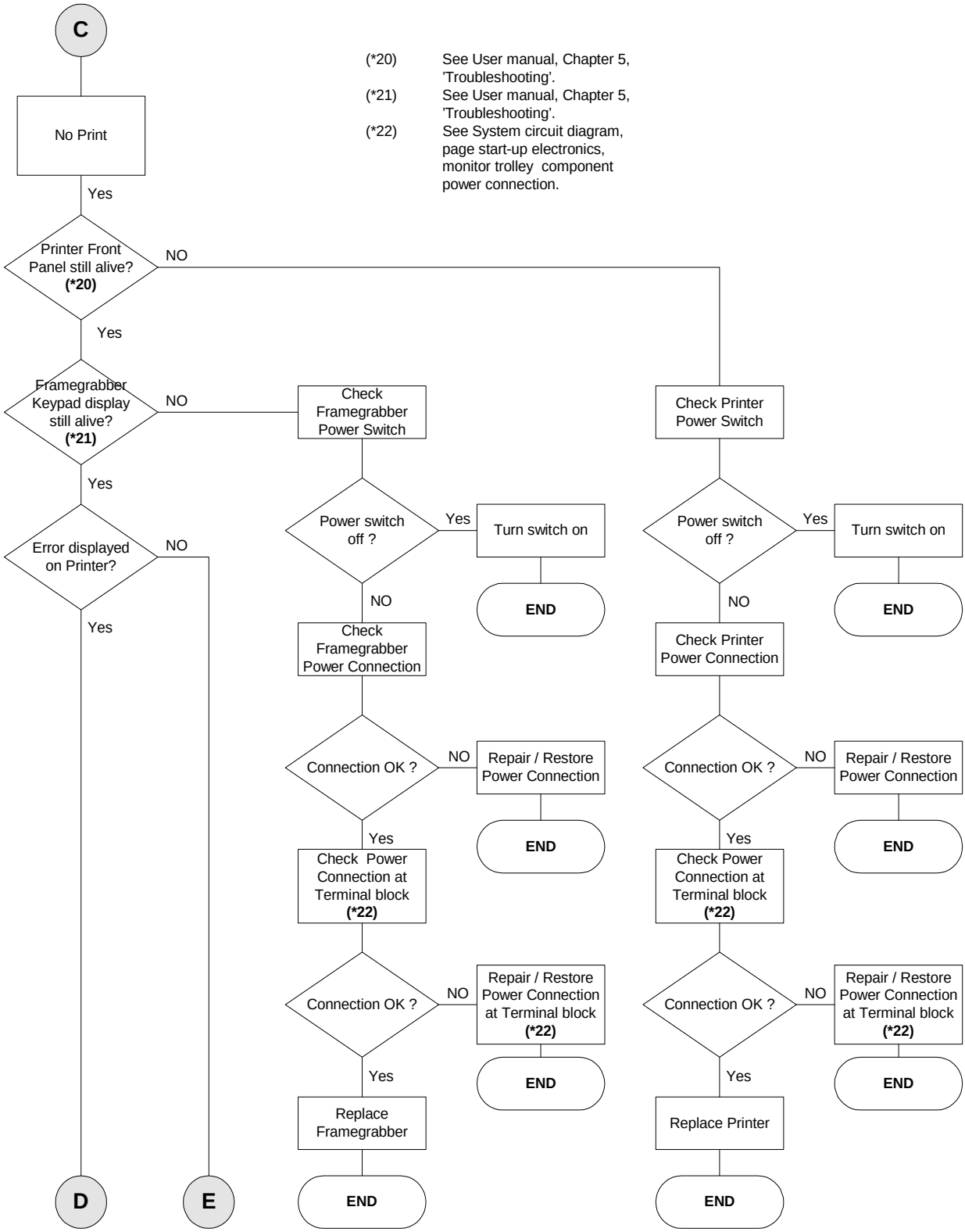




(*1) See section "Selecting the MEMOSKOP SMPTE test image".
(*2) See User manual, 'Loading DirectVista❒ Media'.
(*3) See User manual, Appendix B, menu 'Setup - Media - Film Type'.
(*4) See section "Framegrabber Einstellungen, Default settings".
(*5) See section "ADC Rekalibrierung"

(*1) See section "Selecting the MEMOSKOP SMPTE test image".
(*10) See User manual, Chapter 4: "Maintenance".
(*11) See section "Pixel clock & ADC Rekalibrierung".

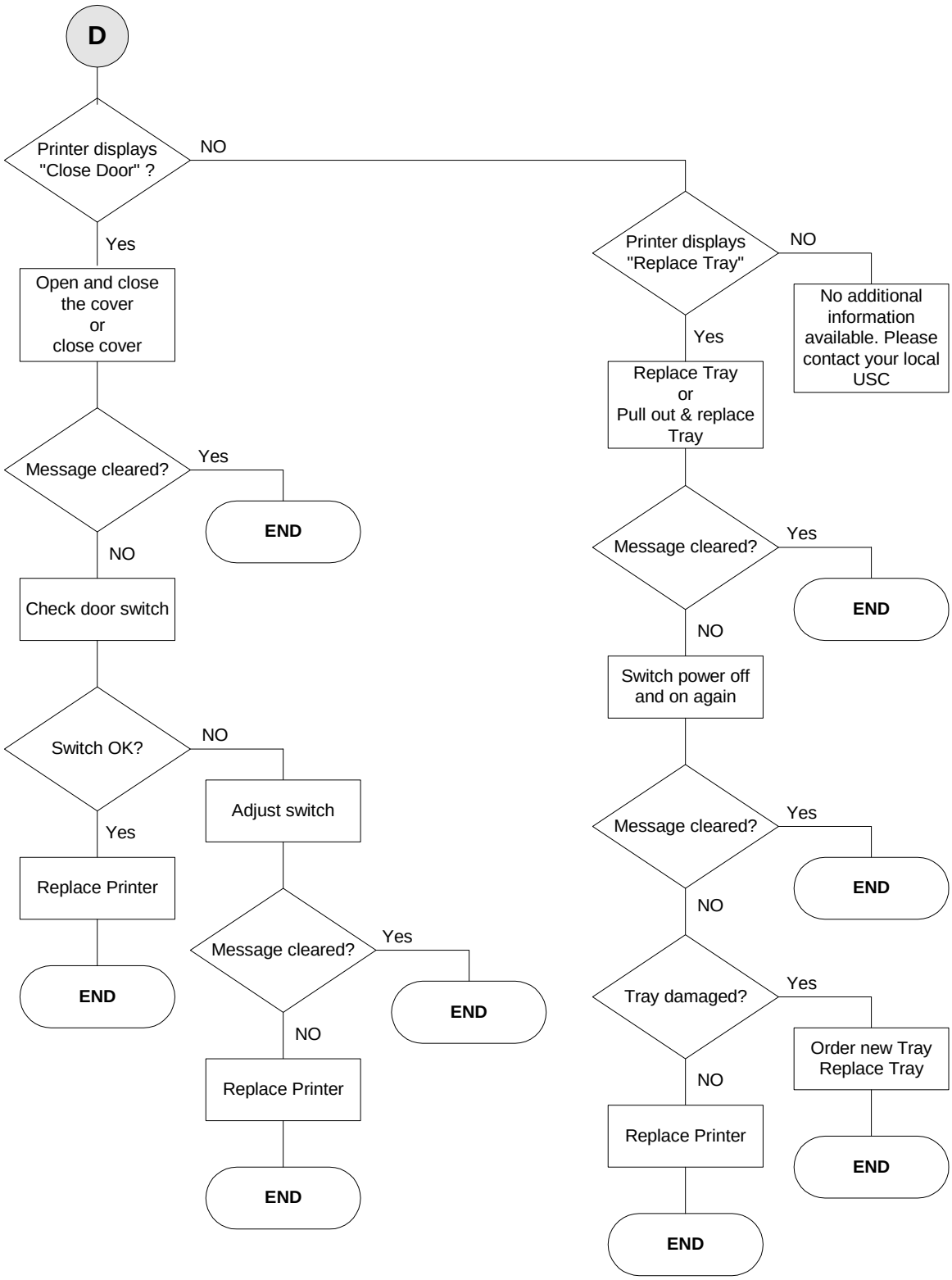


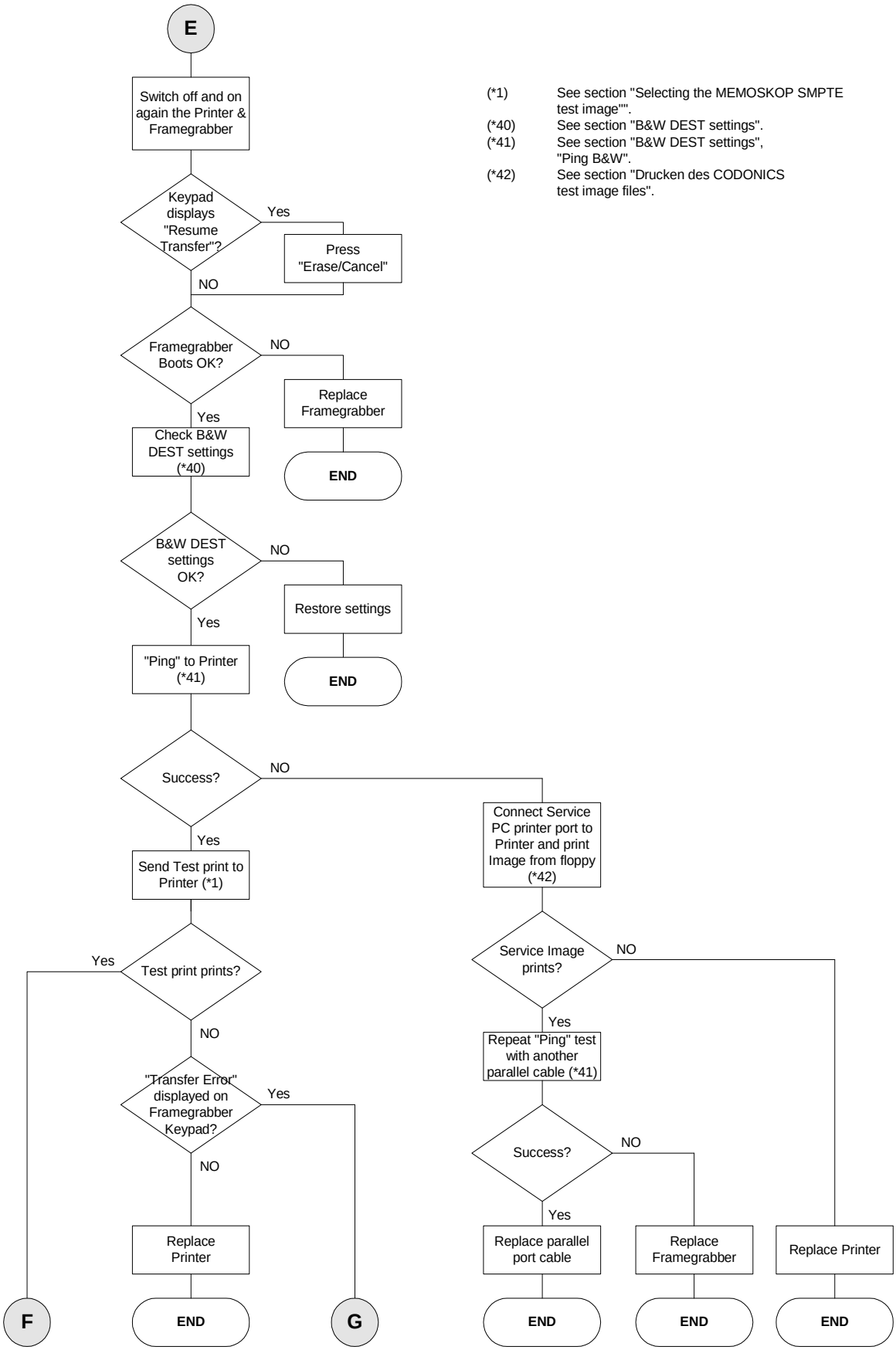


(*20) See User manual, Chapter 5, 'Troubleshooting'.

(*21) See User manual, Chapter 5, 'Troubleshooting'.

(*22) See System circuit diagram, page start-up electronics, monitor trolley component power connection.

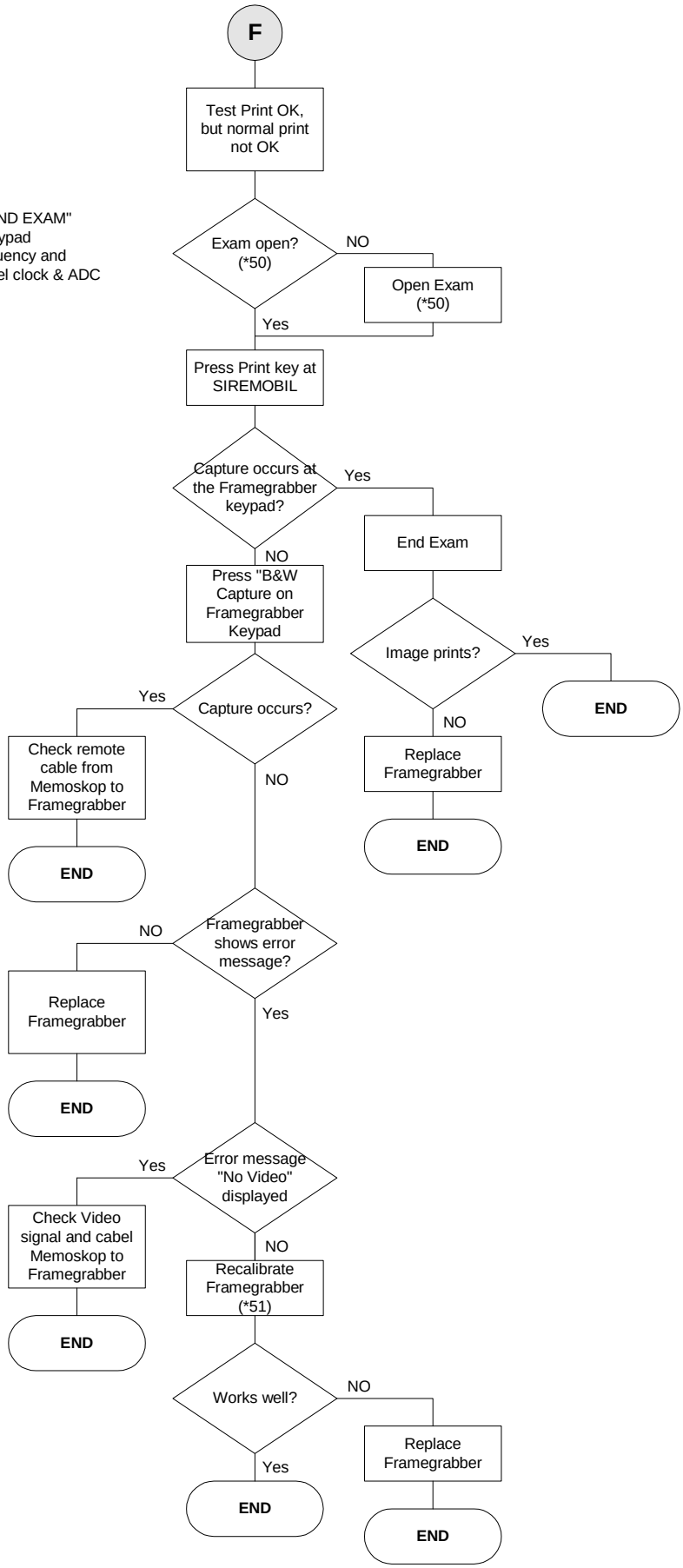

D
Printer displays "Close Door" ?
NO
Yes
Open and close the cover or close cover
Message cleared?
Yes
END
NO
Check door switch
Switch OK?
NO
Adjust switch
Yes
Replace Printer
END
Message cleared?
Yes
END
NO
Replace Printer
END
Printer displays "Replace Tray"
NO
No additional information available. Please contact your local USC
Yes
Replace Tray or Pull out & replace Tray
Message cleared?
Yes
END
NO
Switch power off and on again
Message cleared?
Yes
END
NO
Tray damaged?
Yes
Order new Tray Replace Tray
END
NO
Replace Printer
END

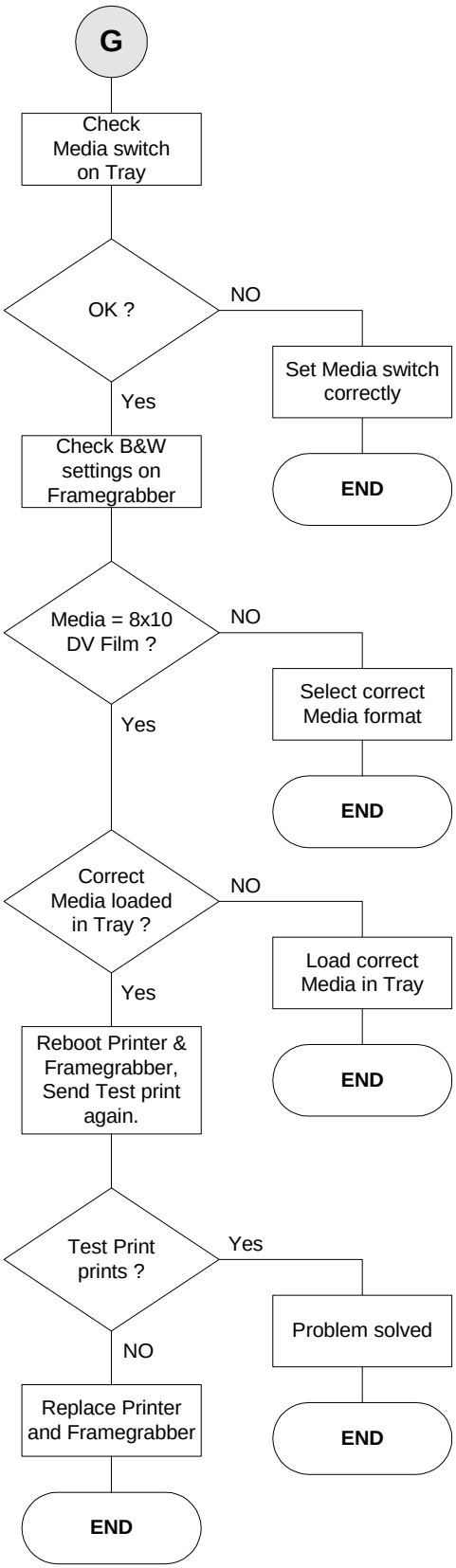


(*1) See section "Selecting the MEMOSKOP SMPTE test image"".
(*40) See section "B&W DEST settings".
(*41) See section "B&W DEST settings", "Ping B&W".
(*42) See section "Drucken des CODONICS test image files".

(*50) press the key "NEW / END EXAM" at the Framegrabber Keypad

(*51) See section "Video frequency and image polarity" and "Pixel clock & ADC recalibration"




G
Check Media switch on Tray
OK ?
NO
Set Media switch correctly
END
Yes
Check B&W settings on Framegrabber
Media = 8x10 DV Film ?
NO
Select correct Media format
END
Yes
Correct Media loaded in Tray ?
NO
Load correct Media in Tray
END
Yes
Reboot Printer & Framegrabber, Send Test print again.
Test Print prints ?
Yes
Problem solved
END
NO
Replace Printer and Framegrabber
END